

WHAT IS CLAIMED IS:

1 1. A portal imaging device positioning apparatus attachable to a
2 radiation therapy device gantry, comprising:
3 a support attachable to said gantry; and
4 a vertically-adjustable portal imaging device positioner
5 attachable to said support, said portal imaging device positioner operable in a
6 first mode and a second mode, wherein in said first mode said portal imaging
7 device positioner maintains an imaging panel in position to receive radiation
8 passing through a body maintained in a patient plane, and wherein in said
9 second mode portal imaging device positioner maintains said imaging panel
10 to receive radiation substantially at said patient plane.

1
1 2. A portal imaging device positioning apparatus according to
2 Claim 1, said vertically-adjustable portal imaging device positioner including:
3 a vertical drive unit adjustably attachable at a mounting cavity to
4 said support; and
5 a mounting unit adjustably attachable to said vertical drive unit,
6 and adapted to deploy said imaging panel from a vertical position to a
7 horizontal position.

1
1 3. A portal imaging device positioning apparatus according to
2 Claim 2, wherein said vertical drive unit is adjustable in said first mode such
3 that a top of said support is substantially adjacent a top of said mounting
4 cavity, and adjustable in said second mode such that a bottom of said support
5 is substantially adjacent a bottom of said mounting cavity.

1
1 4. A portal imaging device positioning apparatus according to
2 Claim 3, wherein said imaging panel is adapted to be temporarily secured to
3 said support during an adjustment from said first mode to said second mode.
4

1 5. A portal imaging device positioning method, comprising:

2 adjusting an imaging panel operably secured to a radiation
3 therapy device gantry from a first position in a first mode below a patient
4 plane to a second position in a second mode at a patient plane.

1 6. A method according to claim 5, said adjusting comprising:
2 temporarily securing a vertically positioned imaging panel to a
3 support;

4 temporarily unsecuring a main drive assembly from said support;
5 adjusting said main drive assembly to said second position;
6 re-securing said main drive assembly; and
7 unsecuring said vertically positioned imaging panel.

1 7. A method according to claim 6, said adjusting comprising:
2 adjusting said vertical drive unit in said first mode such that a top
3 of said support is substantially adjacent a top of a mounting cavity on said
4 vertical drive unit; and
5 adjusting said vertical drive unit in said second mode such that a
6 bottom of said support is substantially adjacent a bottom of said mounting
7 cavity.

1 8. A method according to Claim 7, further comprising
2 horizontally deploying said imaging panel after said imaging panel has been
3 adjusted to said second position.

1 9. A portal imaging system, comprising:
2 a radiation delivery apparatus; and
3 means for deploying an imaging panel in a first mode to receive
4 radiation from said apparatus below a patient plane and in a second mode at
5 said patient plane.

1 10. A system according to Claim 9, said deploying means
2 comprising:

3 a vertical drive unit adjustably attachable at a mounting cavity to
4 a support; and

5 a mounting unit adjustably attachable to said vertical drive unit,
6 and adapted to deploy said imaging panel from a vertical position to a
7 horizontal position.

1 11. A system according to Claim 10, wherein said deploying
2 means further comprises means for adjusting said vertical drive unit in said
3 first mode such that a top of said support is substantially adjacent a top of
4 said mounting cavity, and in said second mode such that a bottom of said
5 support is substantially adjacent a bottom of said mounting cavity.

1 12. A system according to claim 11, comprising:
2 means for temporarily securing said imaging panel to said
3 support; and
4 means for temporarily unsecuring a main drive assembly from
5 said support.

1 13. A portal imaging device method, comprising:
2 providing a support attachable at a first end to a treatment
3 gantry; and
4 providing a vertically-adjustable portal imaging device positioner,
5 said portal imaging device positioner operable in a first mode and a second
6 mode, wherein in said first mode said portal imaging device positioner
7 maintains an imaging panel in position to receive radiation through a body
8 maintained in a patient plane, and wherein in said second mode portal
9 imaging device positioner maintains said imaging panel to receive radiation at
10 said patient plane.

1 14. A method according to Claim 13, said vertically-adjustable
2 portal imaging device positioner including:
3 a vertical drive unit adjustably attachable at a mounting cavity to

4 said support; and

5 a mounting unit adjustably attachable to said vertical drive unit,
6 and adapted to deploy said imaging panel from a vertical position to a
7 horizontal position.

1 15. A method according to Claim 14, wherein said vertical drive
2 unit is adjustable in said first mode such that a top of said support is
3 substantially adjacent a top of said mounting cavity, and adjustable in said
4 second mode such that a bottom of said support is substantially adjacent a
5 bottom of said mounting cavity.

1 16. A method according to Claim 15, wherein said imaging
2 panel is adapted to be temporarily secured to said support during an
3 adjustment from said first mode to said second mode. .